

Appl. No. 09/944,569  
Amdt. Dated July 21, 2005  
Reply to Office Action of February 24, 2005

Docket No. CM03387J  
Customer No. 24,273

### REMARKS/ARGUMENTS

#### Claim Rejections – 35 USC § 112

Claims 16-18 were rejected under 35 USC 112, second paragraph, as being indefinite. Applicant has amended these claims to provide proper antecedent basis of the claim elements claimed therein.

#### Claim Rejections – 35 USC § 102

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17 are rejected under 35 U.S.C. §102(b) as being anticipated by Su (U.S. 5,847,602).

Su describes a delta modulated power amplifier that is linearized with envelope difference feedback. A low-level RF signal is fed to a magnitude amplifier path 30 and a phase amplifier path 40. In the magnitude amplifier path an envelope detector 33 is used to sample the magnitude of the low level RF signal. The envelope is fed to a clocked difference detector 23, which compares the difference of the envelope of the low level RF signal with the envelope of the output of a final amplifier stage. This provides linearization of the modulating signal powering the output stage amp. It does not address gain compression.

In rejecting claim 1, Examiner contends that Su shows Applicant's claim element of "comparing an actual signal to be transmitted with an expected signal at some point in the transmitter," and points to the output of envelope detector 33 of Su as providing an "expected signal," and the output of envelope detector 34 as providing the actual signal to be transmitted. Respectfully, that comparison is inaccurate.

The output of either envelope detector is not an "expected signal." The expected signal as claimed by Applicant, is not analogous to anything in Su because the expected signal does not actually exist in the transmitter, and is determined by, for example, a digital signal processor, as described in the instant application on page 8, lines 12-14. Hence, Applicant carefully chose the term "expected signal" to differentiate it from an actual signal. All of the signals in Su are 'actual' signals. As described by Applicant, the actual signal to be transmitted is, for example, an amplified baseband signal 428, not an envelope signal as in Su. The expected signal may be determined by, for example, multiplying an input signal 406 by an expected gain factor.

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Ordinarily the ratio will remain constant, but occasionally deviations may occur due to compression, as indicated in graph 504.

Furthermore, Applicant has amended claims 1 and 7 to indicate that the actual signal occurs prior to the RFPA. The signal contended by Examiner as being analogous to the actual signal, the output of envelope detector 34 in Su, is the result of a fed-back signal.

As Su does not show the use of an expected signal, Su cannot then show Applicant's claim element of "adjusting the modulation signal in response to detecting a deviation of the actual signal to be transmitted from the expected signal." Additionally, the adjusting performed here is distinct from conventional envelope tracking, which is what is performed by Su's magnitude amplifier path 31, and what is claimed by Applicant's claim element of "providing a modulation signal to a power regulator,...the modulation signal substantially corresponding to the envelope of the signal to be transmitted," before the element of adjusting the modulation signal in claims 1, 7, and 13. Applicant is not merely repeating the limitation of envelope tracking, although Examiner cites the same elements of Su for both of Applicant's claim limitations. Adjusting the modulation signal, then, as claimed by Applicant, must necessarily be read to be different than the envelope tracking recited earlier in each of Applicant's independent claims. Indeed, as described on page 8, lines 17-21, adjusting the modulation signal means to deviate the modulation signal from ordinary envelope tracking. Applicant has amended this limitation in claims 1 and 7 to indicate that the adjusting is performed to maintain a desired gain compression of the RFPA. As indicated on page 5, lines 6-12 of the instant application, the gain of the RFPA and other transmitter characteristics can change due to, for example, thermal drift. Assuming *arguendo* that Su's difference detector maintains gain compression, it does maintain gain compression as transmitter component characteristics change; Su does not describe, for example, adjusting the gain of the class D amplifier 37, or the attenuator 39, or any other component in the envelope tracking circuit to account for such changes.

Accordingly, Applicant believes amended independent claims 1, 7, and 13 are not anticipated by Su, and are allowable over Su. Claims 2, 4, 5, 8, 10, 11, 14, 16, and 17, also rejected as being anticipated by Su, are then allowable as being dependent on allowable claims.

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**Claim Rejections – 35 USC § 103**

Claims 3, 9, and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Su in view of Galius.

Claims 6, 12, and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Su in view of Williams.

The arguments set forth with regard to Su above, are applicable to these claims as they are all dependent on one of the independent claims rejected as being anticipated by Su.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.

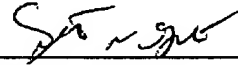
In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

Respectfully submitted,

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